

**Reply under 37 CFR 1.116
Expedited Procedure
Technology Center 2800**

REMARKS

By this response, Applicants have not presented any new amendments to the claims. As a result, claims 1-2 and 4-20 remain pending in this application. Reconsideration in view of the following remarks is respectfully requested.

In the Office Action, claims 1-11 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Japanese Patent No. JP02001168386A (Ito) in view of U.S. Patent No. 5,597,745 (Byun); and claims 12-20 are allowed. Initially, Applicants thank the Examiner for noticing the allowable subject matter of claims 12-20.

Further, Applicants thank the Examiner for the courtesy extended to Applicants' representative during a telephone interview conducted on January 11, 2005. Applicants' representative apologizes for the confusion regarding the Interview Schedule that was apparently faxed to an incorrect USPTO fax number. During the telephone interview, the rejections of claims 1, 4-5, and 8-11 were briefly discussed. No exhibits were presented, and no agreement was reached as a result of the interview. The substance of the telephone interview is incorporated in the following remarks.

Applicants respectfully submit that claims 1-2, and 4-11 are allowable for the following reasons. With respect to claim 1, Applicants respectfully submit that the combination of Ito and Byun fails to suggest the claimed semiconductor structure. In particular, the claimed invention comprises a substrate, a buffer layer formed on the substrate, a first layer formed above the buffer layer, and a textured nitride layer formed on the first layer. In rejecting the claimed invention, the Office alleges that Figure 8 of Ito discloses a semiconductor structure with a substrate (11); a first layer (31) formed above the substrate; and a textured nitride layer (35) formed on the first layer. The Office then combines Ito with Byun, which allegedly discloses, in

**Reply under 37 CFR 1.116
Expedited Procedure
Technology Center 2800**

Figures 6A-6B, a buffer layer (31) between a substrate layer (30) and a textured nitride layer (32). The Office states that one skilled in the art would be motivated to combine the references "in order to protect the substrate from the overlying textured nitride layer."

Initially, as discussed during the telephone interview, Applicants respectfully submit that even if, *arguendo*, Ito and Byun can be properly combined, the combination fails to disclose or suggest the claimed invention. In particular, interpreting Ito and Byun in a light most favorable to the Office's position only for the purposes of this response, both Ito and Byun disclose, in relevant part, a three layer structure comprising a substrate, a middle layer, and a textured layer. In sharp contrast, the claimed invention comprises a structure comprising at least four layers, which include a substrate, a buffer layer, a first layer, and a textured nitride layer. In support of the combination, the Office states that Byun's "buffer layer" would "protect the substrate from the overlying textured nitride layer." However, Applicants note that layer (35) of Ito, which the Office alleges discloses the textured nitride layer, does not contact the substrate (11). In particular, Ito already includes an intervening layer (31) that would "protect the substrate from the overlying textured nitride layer." Consequently, one skilled in the art would not be motivated in this manner. As a result, Applicants respectfully request withdrawal of the rejection of claim 1.

Further, Applicants respectfully submit that Ito and Byun cannot be properly combined in this manner. In particular, Ito "eliminates the warpage of the laminate of a substrate and a III nitride compound semiconductor layer" (Abstract). In order to do this, Ito proposes forming the III nitride compound semiconductor layer "on the surface of a substrate layer formed in a textured structure" (Abstract). To this extent, the addition of another layer between the substrate and the III nitride compound semiconductor layer would likely reduce the effectiveness of Ito's

**Reply under 37 CFR 1.116
Expedited Procedure
Technology Center 2800**

anti-warpage solution and/or alter the functionality provided by Ito's structure. Further, Byun is limited to the formation of "a fine-textured titanium nitride film" (Abstract). To this extent, Byun does not fairly teach or suggest the addition of another layer between the substrate and the III nitride compound semiconductor layer of Ito. As a result, Applicants respectfully request withdrawal of the rejection of claim 1.

With respect to claims 2 and 4-11, Applicants incorporate the same arguments as presented above with respect to claim 1, from which these claims depend. As a result, Applicants respectfully request withdrawal of these rejections.

Further, Applicants respectfully submit that these claims are allowable over the cited art for one or more of their own unique features. To this extent, as discussed in the telephone interview, Applicants have previously requested that the Office withdraw the rejection or particularly point out the portion of Ito that allegedly discloses several of these claimed features. In the Final Office Action, the Office maintained the rejections and failed to further clarify these rejections. As a result, should the Office again maintain one or more of these rejections, Applicants again make the following requests for clarification.

With respect to claim 4, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses at least one of: a GaN layer and an AlInGaN layer formed between the buffer layer and the first layer.

With respect to claim 5, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses a light emitting structure formed between the buffer layer and the first layer.

With respect to claim 8, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses that the textured nitride layer partially covers the first layer.

**Reply under 37 CFR 1.116
Expedited Procedure
Technology Center 2800**

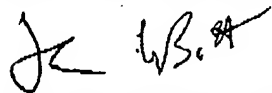
With respect to claim 9, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses that the textured nitride layer forms at least one of: a stripe pattern and a circle pattern.

With respect to claim 10, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses that the first layer and the textured nitride layer comprise a gate barrier structure.

With respect to claim 11, Applicants again request that the Office particularly point out the portion of Ito that allegedly discloses at least one contact formed on the gate barrier structure.

In light of the above, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,



John W. LaBatt, Reg. No. 48,301
Hoffman, Warnick & D'Alessandro LLC
Three E-Comm Square
Albany, NY 12207
(518) 449-0044 - Telephone
(518) 449-0047 - Facsimile

Dated: January 12, 2005